

II. AMENDMENTS TO THE CLAIMS:

Replace the existing claims with the following version in which claims 8 and 10 have been cancelled, without prejudice:

1. (Original) A high-density electrical connector comprising:

a housing which holds a plurality of conductive terminals, the terminals having contact portions for mating to opposing contact portions of opposing terminals of a mating connector, said terminals including at least first and second distinct sets of terminals, each distinct set of terminals including a pair of differential signal terminals and an associated ground terminal, said housing being formed from at least first and second interengaging segments, the first of said segments supporting said first distinct set of terminals, and said second of said segments supporting said second distinct set of terminals; and

the two distinct sets of terminals being disposed in at least two rows on said housing, one of the two rows including a pair of differential signal terminals from said first distinct set of terminals and a ground terminal from said second distinct set of terminals, the other of said two rows including a pair of differential signal terminals from said second distinct set of terminals and a ground terminal from said first distinct set of terminals, said first and second distinct sets of terminals being inverted with respect to each other within said housing.

2. (Original) The high-density connector of claim 1, wherein each of said housing first and second interengaging segments include complementary-shaped projections and recesses.
3. (Original) The high-density connector of claim 1, wherein said housing first and second interengaging segment complementary-shaped projections and recesses are disposed on opposing sides of said segments.
4. (Original) The high-density connector of claim 3, wherein each of said housing first and second interengaging segment complementary-shaped projections and recesses are wedge-shaped.

5. (Original) The high-density connector of claim 1, wherein said terminals include contact portions extending from a first face of said housing segments and tail portions extending from a second face of said housing segments.
6. (Original) The high-density connector of claim 5, wherein said first and second faces are disposed on opposite sides of said housing segments
7. (Original) The high-density connector of claim 1, further including an exterior carrier member that engages said housing segments and holds them together as a unit
8. Cancelled
9. (Original) The high-density connector of claim 5, wherein, for each of said housing segments, said signal terminal contact portions are spaced apart from each other in a horizontal direction and said ground terminal contact portion is spaced vertically apart from said signal terminal contact portions.
10. Cancelled
11. (Original) The high-density connector of claim 2, wherein each of said housing first and second interengaging segment complementary-shaped projections and recesses includes mortise and tenon members.
12. (Original) The high-density connector of claim 1, wherein said terminals are arranged in a triangular pattern in each of said housing segments, such that said two differential signal and said associated ground terminals are arranged at vertices of an imaginary triangle and maintain the triangular pattern through said housing segments.
13. (Original) The high-density connector of claim 5, wherein said terminal contact portions are arranged in a triangular pattern on said housing segment first faces, whereby said contact portions of said two differential signal and said associated ground terminals are arranged at vertices of an imaginary triangle when viewed from said first faces thereof.

14. (Original) The high-density connector of claim 13, wherein said terminal tail portions are arranged in a triangular pattern on said housing segment second faces, whereby said tail portions of said two differential signal and said associated ground terminals are arranged at vertices of an imaginary triangle when viewed from said second faces thereof.
15. (Original) The high-density connector of claim 2, wherein said projections and recesses are sized so as to leave air gaps between portions adjacent ones of said interengaging housing segments.
16. (Original) The high-density connector of claim 15, wherein the air gaps extend in horizontal directions.
17. (Original) The high-density connector of claim 15, wherein said air gaps extend in vertical directions.

III. INFORMATION DISCLOSURE STATEMENT

Applicants hereby bring to the attention of the U.S. Patent Office, the following art which may be relevant to the patentability of the above-mentioned patent application pursuant to 37 CFR §§ 1.56, 1.97 and 1.98.

The Commissioner is hereby authorized to charge the applicable fee, \$180.00 or any deficiency in the fee or credit any overpayment thereof to Deposit Account No. 50-1873.

One of the prior art items is a Japanese application for which applicants have obtained and submitted a computer-based English translation provided by the Japanese Patent Office. Applicants make no representation as to the accuracy of this machine-based translation and reserve the right to obtain and submit their own translation at a subsequent date.

I. U.S. PATENTS

1. U. S. Patent No. 4,337,989 (ASICK) July 6, 1982
2. U. S. Patent No. 4,628,410 (GOODMAN et al.) December 9, 1986
3. U. S. Patent No. 4,678,121 (DOITY et al.) July 7, 1987
4. U. S. Patent No. 4,790,765 (EHRENFELS et al.) December 13, 1988
5. U. S. Patent No. 4,824,383 (LEMKE) April 25, 1989
6. U. S. Patent No. 4,981,447 (ICHITSUBO) January 1, 1991
7. U. S. Patent No. 5,046,960 (FEDDER) September 1991
8. U. S. Patent No. 5,256,985 (TAN et al.) October 26, 1993
9. U. S. Patent No. 5,281,169 (KIAT et al.) January 1994
10. U. S. Patent No. 5,490,786 (MOSQUERA et al.) February 13, 1996
11. U. S. Patent No. 5,525,067 (GATTI) June 11, 1996
12. U. S. Patent No. 5,725,400 (MORIKAWA) March 1998
13. U.S. Patent No. 5,876,248 (BRUNKER et al.) March 1999
14. U. S. Patent No. 5,895,276 (ROTHENERGER) April 1999
15. U. S. Patent No. 5,954,541 (OZAI et al.) September 21, 1999
16. U. S. Patent No. 6,007,352 (AZUMA et al.) December 28, 1999
17. U. S. Patent No. 6,139,371 (TROUTMAN) October 31, 2000
18. U. S. Patent No. 6,142,804 (PELOZA et al.) November 7, 2000
19. U. S. Patent No. 6,164,995 (PELOZA) December 26, 2000
20. U. S. Patent No. 6,280,209 (BASSLER et al.) August 28, 2001
21. U. S. Patent No. 6,350,134 (FOGG et al.) February 26, 2002
22. U. S. Patent No. 6,431,882 (NODA et al.) August 13, 2002
23. U. S. Patent No. 6,454,605 (BASSLER et al.) September 24, 2002
24. U. S. Patent No. 6,457,983 (BASSLER et al.) October 1, 2002
25. U. S. Patent No. 6,540,559 (KEMMICK et al.) April 1, 2003
26. U. S. Patent No. 6,575,789 (BASSLER et al.) June 10, 2003

II. FOREIGN PATENTS

27. German Patent No. 3,412,700 (SIEMENS), April 4, 1984
28. German Patent No. 19821868 (MOLEX), November 19, 1998

29. European Patent Application No. 0 486 298 (SASAKI et al.) May 20, 1992
30. European Patent Application No. 0 529 350 (ROCHE) March 3, 1993
31. European Patent Application No. 0 766 352 (BEUTLER et al.) April 2, 1997
32. European Patent Application No. 0 793 297 (O'SULLIVAN et al.) September 3, 1987
33. European Patent Application No. 0 836 247 (MISKIN et al.) April 15, 1998
34. European Patent Application No. 1 239 552 (KATO et a.) September 11, 2002.
35. WIPO Publication No. 89/11169 (LEMKE et al.) Published November 16, 1989. This publication is similar to U.S. Patent No. 4,824,383, previously considered by the Examiner, but it has additional Figures 20-22 that were not present in the previously cited '383 patent.
36. WIPO Publication No. WO 02/101883 (FROMM et al.) December 19, 2002
37. WIPO Publication No. WO 03/026078 (BRUNKER et al.) March 27, 2003
38. Japanese Patent Application No 09-221691 (KAZUKI), Published September 3, 1999 as publication number 11-067369. As stated above, a computer-based translation obtained from the Japanese Patent Office is enclosed.

III. PUBLICATIONS

39. IBM Technical Disclosure Bulletin, Vol. 39, No. 8, August 1996 - "Personal Computer Channel Connector" Pages 181-182.
40. International Search Report in counterpart PCT application No. PCT/us03/19704, dated October 20, 2003.

A copy of each of the above noted references is enclosed, as is a completed form PTO-1449. This should not be construed as a representation that a search has been performed by applicants.